

CLAIMS

1. An image sensor comprising a matrix (14) of rows and columns of photosensitive dots, made on a chip (10) of general square or rectangular shape with beveled corners, characterized in that it comprises a reading register (20) placed at the bottom of the matrix, this register being bent so as to run alongside the beveled corners of the chip and therefore comprising a horizontal part (22) and two oblique parts (24, 26), the sensor furthermore comprising means (ZI_n) for directing photosensitive charges of columns terminating opposite the beveled corners to register stages situated in the oblique parts alongside the beveled corners.

2. The image sensor as claimed in claim 1, characterized in that the means for directing the charges comprise insulation zones (ZI_n , ZI_{n+1} , etc.) between columns, these zones being bent so as to facilitate the transfer of charges originating from the columns to the register.

3. The image sensor as claimed in one of claims 1 and 2, characterized in that each row of the matrix comprises several electrodes (Ea_m , Ea'_m , Ea''_m , Eb_m , etc.) extending in a linear strip and in that the ends of certain of these electrodes are bent so that, inside a column (C_{n-1}) terminating on an oblique part of the register, the last electrode (Eb_m) of the last row of this column extends parallel to the beveled corner, the electrodes (Ea''_m , Ea'_m , Ea_m) which precede this electrode having shapes intermediate between an oblique strip shape and a horizontal strip shape so as to facilitate the transmission of charges under these electrodes from the column to the register.

4. The image sensor as claimed in claim 3,

characterized in that the last electrode (Eb) of the last row of the matrix extends continuously along the horizontal part and the oblique parts of the register.

5 5. The image sensor as claimed in one of claims 1 to 3, characterized in that it comprises several metallic conductors (Ma, Ma', Ma'', Mb) extending along the register and coming into contact locally with the various charge transfer electrodes constituting the
10 rows of the matrix.

6. The image sensor as claimed in one of the preceding claims, characterized in that the reading register possesses a central output, that is to say it
15 is divided into two half-registers operating in opposite senses so as to bring the charges from the left half of the matrix to the right and the charges from the right half to the left.

20 7. The image sensor as claimed in one of the preceding claims, characterized in that the chip is covered with a scintillator.

8. An application of the sensor as claimed in claim 7
25 to intraoral dental radiological image capture.